

# iTechnology Pilot Study Outcomes

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In the spring of the 2010-2011 school year, the Early Childhood and Educational and Life Skills (EC/ELS) Program at NSSED conducted a study to determine whether or not the use of iTechnologies (iPod Touch and iPad) in the classroom had a positive impact on student outcomes. The EC/ELS program serves students ages three through twenty-one with low incidence disabilities.

The iPod Touch and the iPad are mobile personal devices. These types of personal devices offer unique features such as the intuitive direct touch interface that make them particularly beneficial for use in special education. There is no longer a need for a mouse that activates a cursor. Students simply use their finger to select what they want or to move objects on the screen. These devices are also lightweight, portable, have a long battery life, and are relatively inexpensive.

The iPod Touch and iPad gain functionality by running applications, or “apps.” There are literally hundreds of thousands of apps available, ranging from the very simple (e.g., vocabulary apps that work like flashcards) to the very complex (e.g., comprehensive vocabulary and language systems that are used like a traditional communication device for students without intelligible speech). The simple apps are often free, while complex communication apps can cost more than \$200.00. Most apps are in the \$0.99 to \$5.99 range. More quality education-related apps are appearing on the market every day.



The iPad was first made available to the public in April of 2010, and by the fall of the following school year, it was clear that NSSED as an organization needed to evaluate the potential use of this tool in the special education classroom. Several events led up to the implementation of the iTechnology Pilot. A stakeholder group that was made up of various NSSED and member district staff members was formed to consider potential uses for the iPod Touch and iPad for students and adults with disabilities, and to evaluate potential issues surrounding infrastructure/device management, policy, and curriculum integration. This group met four times during the 2010-2011 school year. In addition, NSSED’s Association of Parents and Staff (APS) hosted a workshop early in the fall that focused on apps for use at home and in the community, and the response was overwhelming with over 250 parents and educators in attendance. Finally, many parents were expressing interest and curiosity about how their student might be able to benefit from the use of an iPad at home and in school.

## Pilot Program Overview

One purpose of the iTechnology Pilot in the EC/ELS program was to build on the work of the NSSED iTechnology Stakeholder group by answering questions related to (a) infrastructure and device management, (b) curriculum integration, and (c) policy and guidelines for use of the devices. More importantly, the pilot was designed to evaluate whether the use of iPads and iPod Touches in the classroom had a positive impact on students.

TOPIC	RESEARCH QUESTIONS
<b>Infrastructure / Management</b>	<ul style="list-style-type: none"> <li>What is the best way to manage the devices in EC/ELS classrooms?</li> <li>Where will they be synced? To what iTunes account?</li> <li>How reliable and durable are the devices when used in EC/ELS?</li> </ul>
<b>Curriculum Integration</b>	<ul style="list-style-type: none"> <li>How will quality apps be located, purchased, and loaded?</li> <li>How will the devices be used in the classroom?</li> <li>How can they be used to support IEP goals?</li> </ul>
<b>Policy</b>	<ul style="list-style-type: none"> <li>What happens when a device is broken, lost, or stolen?</li> <li>What is the experience of having NSSED-owned iTechnology, district-owned iTechnology, and parent-owned iTechnology in the same classroom?</li> </ul>
<b>Student Outcomes</b>	<ul style="list-style-type: none"> <li>Can iTechnology be used in EC/ELS classrooms to enhance educational outcomes?</li> <li>Are there benefits to the use of the iPads / iPod Touches over traditional tools that are used to support instruction in the classroom?</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>Would iPads be beneficial for staff / administrator use?</li> <li>When can it be used in place of a laptop and when can it not?</li> </ul>

## Timelines

MONTH	ACTIVITY
<b>January 2011</b>	<ul style="list-style-type: none"> <li>Gathered information about existing iTechnology in EC/ELS classrooms.</li> <li>Approached staff members about potentially being in the pilot and obtained their commitment.</li> </ul>
<b>February 2011</b>	<ul style="list-style-type: none"> <li>Put in order for the eight iPads, eight iPod Touches, and other accessories, including several different types of cases.</li> </ul>
<b>March 2011</b>	<ul style="list-style-type: none"> <li>The iTechnology pilot group was given an introduction presentation about the pilot, including expectations for data collection.</li> <li>The pilot staff was asked to create a list of apps that they wanted loaded onto their iPad or iPod Touches.</li> <li>Pilot staff set up times to pick up their iPads / iPod Touches at NSSED</li> </ul>
<b>April 2011</b>	<ul style="list-style-type: none"> <li>Hosted meeting for pilot staff members. Meeting agenda included opportunities to share initial impressions, identify needs, share apps, and discuss how data collection was progressing.</li> </ul>
<b>May 2011</b>	<ul style="list-style-type: none"> <li>Hosted second meeting for pilot staff members. Meeting agenda provided opportunity for pilot staff to share experiences and provide feedback.</li> </ul>
<b>June – August 2011</b>	<ul style="list-style-type: none"> <li>Data were analyzed and outcomes summarized.</li> </ul>
<b>September – December 2011</b>	<ul style="list-style-type: none"> <li>Initiated second EC/ELS iTechnologies Pilot with thirteen additional iPads.</li> <li>Second Pilot group identified via application process.</li> </ul>

## Method

Before the pilot study, roughly 33% of EC/ELS classrooms already had an iPad or iPod Touch in them that was either a) parent-owned, b) member district-owned, c) obtained through a grant, or d) personal property of NSSED staff member. Because time was tight to complete the study and teachers were going to need to be able to be up and running with the devices quickly, teachers who already had some experience with iTechnologies in their classrooms were approached to be a part of the pilot.

A total of sixteen devices (eight iPads and eight iPod Touches) were purchased to be included in the pilot study. The majority of these devices were put in the classrooms of four teachers. In addition, several NSSED staff members were given iPads as a part of the pilot in order to evaluate how non-classroom teachers could use the devices to support their job functions and productivity.

DISCIPLINE	EQUIPMENT
<b>Early Childhood Teacher</b>	1 iPad, 2 iPod Touches
<b>Elementary Teacher</b>	1 iPad, 2 iPod Touches
<b>Jr. High Teacher</b>	1 iPad, 2 iPod Touches
<b>High School Teacher</b>	1 iPad, 2 iPod Touches
<b>Speech &amp; Language Pathologist</b>	1 iPad
<b>Intervention Specialist</b>	1 iPad
<b>Program Supervisor</b>	1 iPad
<b>Vocational Coordinator</b>	1 iPad

After the devices arrived, the staff members involved with the pilot were given a short training that provided them with information on where to find apps, how to request apps, and how to collect the data. Each staff member participating in the pilot study was allocated \$100 to put toward app purchases. Pilot staff members were asked to identify the apps that they wished to have loaded on their devices to start with. The decision was made to have the devices sync to an iTunes account located at the NSSED District Services Center in order to have greater control over the devices during the pilot study. If staff members wished to add more apps to their devices during the trial, they put in a request to the tech team who purchased the apps through Apple's Volume Purchase program and loaded the additional apps.

Both qualitative and quantitative data were collected in order to evaluate the outcomes of the pilot study. The qualitative data consisted of staff impressions and feedback with regards to the pilot study research questions solicited at the two separate meetings during the pilot program. The quantitative data came from data sheets that were collected by pilot staff on student performance when using the iPads and iPod Touches, and when using more traditional classroom tools.

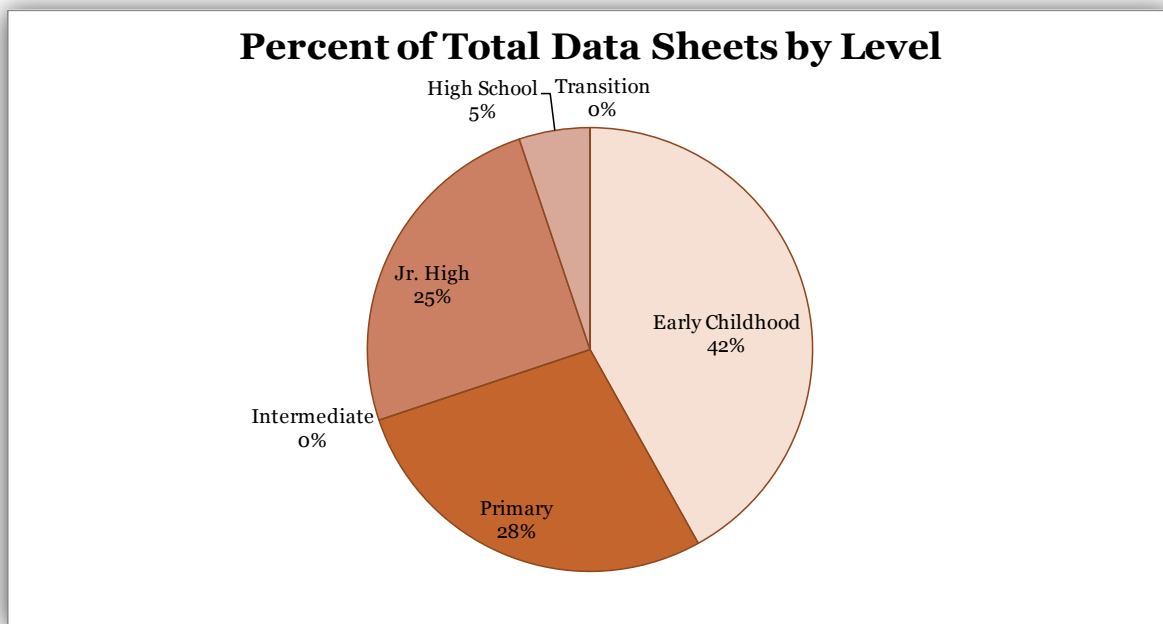
## Results

In order to evaluate the potential impact of the iPod Touches and iPads on student outcomes, teachers were asked to collect data on student performance when using both traditional classroom tools (e.g., books, flashcards, timers) and iTechnologies (e.g., book app, vocabulary app, visual timer app). This strategy of collecting the same information when using both traditional classroom tools and iTechnologies allowed the evaluators to compare their relative impact on student performance. The data sheets required that staff provide information about when and how the tools were being used (time of day, size of

group, goal of task). Data collectors were also asked to rate student performance in the areas of Behavior, Accuracy, Motivation, and Independence (see Appendix A).

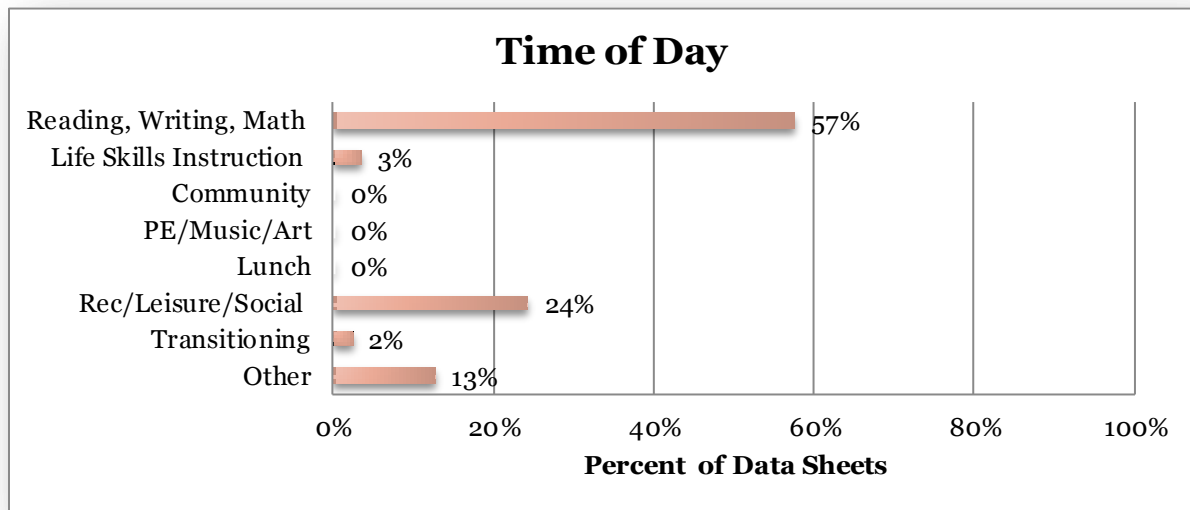
Certified staff completed a total of 136 data sheets over the course of the pilot study (March – June). Thirty-six percent of the data sheets were completed when traditional classroom tools were being used to support instruction, and 64% of the data sheets were completed when iTechnologies were being used. The majority of the data sheets were collected at the Early Childhood (42%) and Primary (28%) levels, while only 5% of the data sheets came from the High School and Transition levels. Consequently, the results of this pilot study primarily represent data collected on younger students (see Figure 1).

Figure 1: Percent of Total Data Sheets by Level



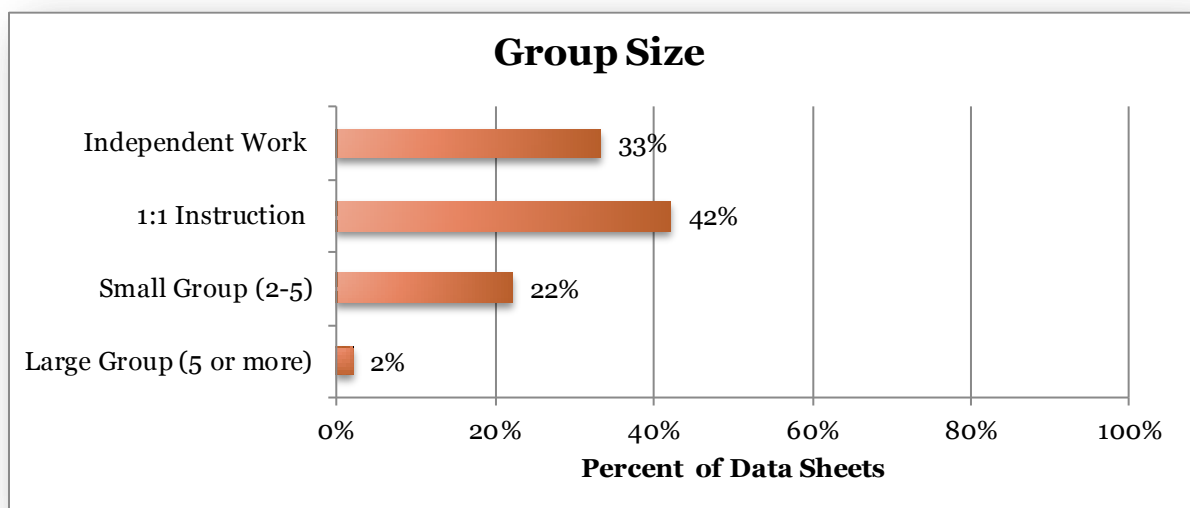
When collecting data, staff members were asked to indicate during which part of the school day the tool was being used, the size of the group using the tool, and what the goal was of the instruction involving that tool. In order to gain a better understanding of when, how, and why the iTechnologies were being used in the classroom, the data sheets that reflected use of iPads and iPod Touches were identified and analyzed separately from the other data sheets (see Figures 2, 3, and 4 below). These data suggest that the iPads and iPod Touches were most likely to be used when working one-to-one with a student (22%) on a Reading/Writing/Math task (57%) in order to provide Discrete Skill Instruction (55%).

Figure 2: Time of Day iPad / iPod Touch Data Collected



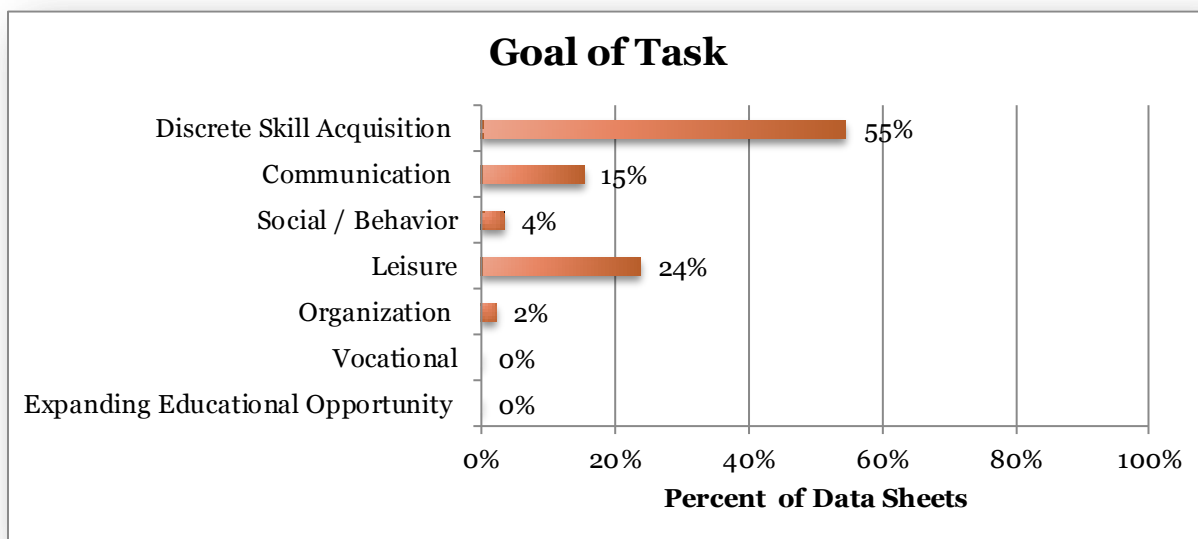
With regard to the Time of Day (Figure 2), the data suggest that the iPad and iPod Touch were most likely to be used during Reading/Writing/Math instruction (57%), and that they were also more likely to be used during Recreation/Leisure/Social periods in the day (24%). Thirteen percent of the data sheets were collected during “Other” times of the day, which most often was Speech and Language Therapy. The iTechnology tools were much less likely to be used during Life Skills Instruction and when Transitioning, with only 3% and 2% respectively of the data sheets being collected during these times. No data sheets were collected on iPads or iPod Touches being used in the Community, during Lunch, or while at PE / Music / Art.

Figure 3: Group Size when iPad / iPod Touch Data Collected



In terms of group size (Figure 3), the iPad and iPod Touch were mostly used to support One-to-One instruction (22%) or to provide an opportunity for students to work on a task Independently (18%). The iPad was sometimes used during Small Group instruction (12%), but it was least likely to be used during Large Group instruction (1%).

Figure 4: Goal of Task when iPad / iPod Touch Data Collected



Data collectors were asked to indicate the goal of the task that they were using the iTechnology to support, or the outcome that they were trying to achieve. The data suggest that the iTechnology tools were most frequently used to support Discrete Skill Acquisition (55%). Examples of discrete skill acquisition include identifying letters or numbers, teaching specific vocabulary, or working on a specific motor movement. The iPad / iPod Touches were also used with the goal of improving Communication Skills and Leisure Skills (15% and 24% of data sheets respectively). They were least likely to be used to support outcomes in the areas of Social Skills / Behavior, Organization, and Vocational Skills. There is no evidence to suggest that the iPads and iPod Touches were used to Expand Educational Opportunities. In other words, they were not used for “in the moment” reinforcement of concepts, such as pulling up a picture of a new vocabulary word, or identifying a place on a map that is mentioned in a book.

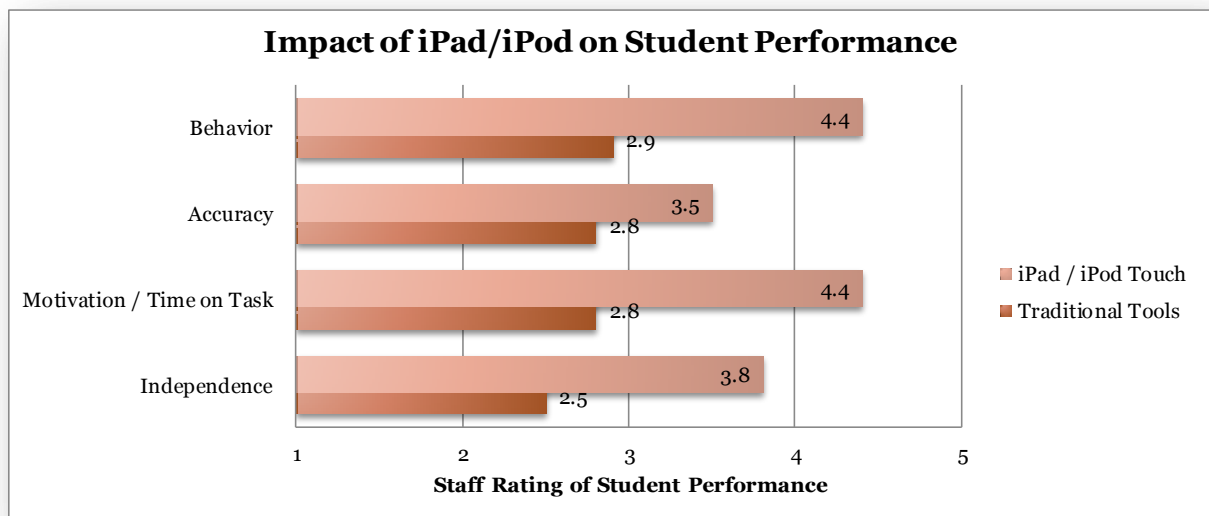
It is important to note that these outcomes primarily reflect data collected at the Early Childhood and Elementary levels. It is likely that greater representation from the High School and Transition levels would have resulted in different outcomes, especially with regard to when, how, and why the iPad and iPod Touches were being used.

### Impact on Student Outcomes

One of the primary goals of the iTechnology pilot project in the EC/ELS program was to determine whether or not the use of iPads and iPod Touches in the classroom had an impact on student performance. It was important to the district to evaluate the potential benefits and drawbacks to the use of such tools before investing large amounts of time and money in their implementation.

In order to gather quality information about the impact of iTechnologies on student performance, staff members were asked to take data both when traditional classroom tools and when iTechnologies were being used to support instruction. The staff was asked to rate student performance in terms of Behavior, or the percentage of time they were engaged in appropriate behavior during the activity, level of Accuracy when completing the task, the percentage of time that the student was Motivated / Engaged during the activity, and finally, the level of Independence demonstrated when completing the task.

Figure 5: Impact of iPad/iPod Touch on Student Performance Compared to Traditional Tools



	1	2	3	4	5
<b>Behavior</b>	Student engaged in appropriate behavior 0-20% of the time.	20-40% appropriate behavior	40-60% appropriate behavior	60-80% appropriate behavior	Student engaged in appropriate behavior for 80-100% of the time.
<b>Accuracy</b>	Student was 0-20% accurate in demonstrating the task.	20-40% accurate	40-60% accurate	60-80% accurate	Student was 80-100% accurate with demonstrating the task.
<b>Motivation / Time on Task</b>	On task 0-20% of the activity. Student was not interested or involved.	On-task 20-40% of task	On-task 40-60% of task	On-Task 60-80% of task	On-task 80-100% of task. Student was fully engaged and interested.
<b>Independence</b>	Independent 0-20% of task. Required full support and full prompting from adult.	Independent 20-40% of task	Independent 40-60% of task	Independent 60-80% of task	Independent 80-100% of task. Required little to no prompting/ support

These data suggest that when teachers were using iPads and iPod Touches to support instruction, as compared to using more traditional classroom tools, students in the EC/ELS Program engaged in appropriate behavior a greater percentage of the time, demonstrated increased accuracy in performing the task, showed more interest and motivation in the instruction, and demonstrated increased independence with less adult support.

The greatest difference in student performance when comparing iTechnologies to traditional classroom tools occurred in the area of Motivation / Time on Task. Teacher ratings of student performance in this area almost doubled when using the iPad or iPod Touch. A casual observer does not need pages full of concrete data to discern that students gravitate to the iPad, and that this device has the ability to capture their attention unlike any other classroom tool. Both the quantitative data and the informal observations support the fact that students were more engaged when instruction involves the iPad.

The impact of using iTechnologies in the classroom on student performance will continue to be evaluated. More data from a larger, more representative sample of students over a longer period of time is needed. One important question is whether improvements in student behavior, accuracy, motivation, and independence will continue to be observed or whether the effects of the iPad / iPod Touch will wane with additional exposure.

### Feedback Collected From Pilot Staff

Feedback from staff involved in the pilot project was gathered during two different meetings, one in April and one in May. During these meetings, staff members were given the opportunity to provide their impressions on how the pilot was progressing in a number of different areas. The following table, sorted by outcomes area, is a summary of their feedback and comments.

TOPIC	STAFF COMMENTS / FEEDBACK / EXPERIENCE
<b>Infrastructure / Management</b>	<ul style="list-style-type: none"> <li>• The devices were reliable and durable. Not one was broken or damaged, despite being dropped and banged around.</li> <li>• The devices were portable. They could easily be moved among students or between learning stations.</li> <li>• Seemed more durable than a laptop.</li> <li>• Much less to carry as compared to armfuls of traditional tools such as timers, schedules, clipboards, etc.</li> <li>• Found the AMDI iAdapter cases with built in speakers to be durable and helpful in loud classrooms.</li> <li>• Otterbox Defender Series cases protected the iPads very well.</li> <li>• Some staff experienced difficulty accessing Wi-Fi in the classroom. This eliminated the functionality of some of the apps.</li> <li>• Travelling back and forth to the District Services Center to sync and get new apps on the iPad was too time consuming.</li> <li>• If the device did not come back to the district office periodically to be synced, there was no backup of the data on the device.</li> <li>• Although using Apple's Volume Purchase Program (VPP) to purchase apps was often a long and laborious process, it was the only way to purchase more than one copy of an app on a single iTunes account. It also offered the added benefit of helping to track the app purchases.</li> </ul>
<b>Curriculum Integration</b>	<ul style="list-style-type: none"> <li>• Found that locating appropriate apps to use was an extremely time consuming and frustrating process.</li> <li>• Many of the apps were too busy – there was too much writing on the screen or there was music playing in the background.</li> <li>• Some of the apps could be customized, but it was not always clear how to do so.</li> <li>• Often the app was not what was expected so it felt like it was a waste of money.</li> </ul>



	<ul style="list-style-type: none"> <li>• It was a challenge to find age appropriate apps for the high school students. Many of the apps that were at their academic level were too primary looking.</li> <li>• The apps that worked on specific skills (e.g., handwriting or phonics) had to be evaluated to determine if the app was “teaching” that skill appropriately.</li> <li>• It was very helpful when there was a lite “free” version of the app.</li> <li>• Staff liked that you could use a single device to take a picture with the camera, sequence the photos to make a story, narrate it, and then publish it in iBooks to be read later.</li> <li>• Used the devices to facilitate peer interactions. When the tools were used in inclusion, the other students also got excited about it and wanted to interact.</li> <li>• Found that there are a large number of quality free apps.</li> <li>• It was beneficial to use the iPad when working with more than one student. One student could be practicing the target skill on the iPad while the other was doing drills with the teacher.</li> <li>• Used the iPad to facilitate choice making, turn taking, skill practice, video modeling, and as a reward.</li> <li>• When used as a reward, the students were still working on the same target skill, so it was ascertained that the iPad was actually increasing instructional time.</li> <li>• Found the social story apps labor intensive to set up.</li> <li>• Disappointed that many of our useful website subscriptions such as Tumblebooks could not be accessed on the iPad because they use Flash.</li> </ul>
<b>Policy</b>	<ul style="list-style-type: none"> <li>• None of the iPads or iPod Touches was lost, damaged, or stolen during the pilot study, so there was not an opportunity to test the warranty and go through the repair process.</li> <li>• The experience with family-owned devices in the classroom was generally positive. When parents were responsible for the device they were able to put the student’s personal photos, videos, and music on the device.</li> <li>• Many parents are purchasing iPads and iPod Touches for home use. Home use is often much greater with these devices because they are so easy to pick up and use, compared to other tools such as AAC devices that often require training.</li> <li>• Found that the pilot study prompted much discussion and evaluation of NSSD and member district policy regarding a) the use of mobile devices in the classroom, b) acceptable internet use, and c) personal property policy.</li> </ul>
<b>Student Outcomes</b>	<ul style="list-style-type: none"> <li>• For students at the Transition level, one major benefit of the iPod Touch is that it fits in a student’s pocket or purse, and thus doesn’t attract undue attention to them when using it at the job site.</li> <li>• When used by a student on a job site, the device can serve as the student’s scheduler, their time keeper, and as their entertainment (book/music) when on break.</li> <li>• Observed substantial increases in independence in the job setting when iTechnology was used.</li> <li>• Typically don’t have to teach parents how to use the iTechnology devices so there is much better support for students at home.</li> <li>• Found that some of the students who initially were not at all interested in using the tools were independent in using them by the end of the pilot.</li> <li>• Did experience some difficulties with perseveration with the iPads for some students, which created some behavior difficulties.</li> <li>• One teacher reported carry over effects, with students being more interactive during all instruction, not just when it involved the iPad.</li> <li>• Found the devices to be very powerful when used as a reinforcement tool.</li> <li>• Some students who were previously not able to work independently demonstrated that they could engage in activities on the iPad independently for an extended period of time.</li> <li>• Pilot staff reported that the use of the iTechnology in their classrooms has been</li> </ul>

	<p>highly successful.</p> <ul style="list-style-type: none"> <li>• Found students to be more motivated and on task with the iPad.</li> <li>• Most students were easily able to access the iPad, even those who experience difficulty with physically accessing other tools. However, some students did have fine motor / access issues with the iPad, even with practice.</li> <li>• One staff member reported that a student had greatly exceeded expectations with what they were able to achieve when the iPad was used to support literacy instruction, especially in the area of sound-symbol relationships.</li> <li>• Some students demonstrated generalization with the skills learned on the iPad/iPod Touch, while others did not.</li> <li>• Parent response to the pilot project was very positive. Many parents wanted to know what apps they were working on at school so that they could put them on their home devices, too.</li> <li>• Teachers were not willing to give up their iPads at the end of the pilot. They had become essential tools in the classroom.</li> <li>• At the primary levels, the iPads were found to be much more beneficial. At the high school and transition levels, teachers found the iPod Touch to be very useful because of its portability. However, the iPad was still found to be beneficial as a classroom-based tool.</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>• It was a challenge to use the device as a tool to be shared among all the students in a classroom. There is no way to “log on” to the device as different users. In addition, each app has its own settings, and very few of the apps allow you to save multiple settings for multiple users. Staff would have liked to do a folder for each student, but can’t have an app in more than one place. More training was needed for staff who had not previously used an iPad or other Apple device. Too many assumptions were made with regard to their ability to simply pick up the device and use it effectively.</li> <li>• The pilot staff appreciated the ability to meet frequently in order to talk about their experiences, share apps, and trade other tips and tricks.</li> <li>• It was suggested that we needed to train the students on how to use the iPad / apps</li> <li>• Teaching assistants also required some training on the use of the device and on the apps themselves.</li> <li>• The students seemed to be more drawn to the iPad than to the iPod Touch.</li> <li>• Used the iPod Touch a lot for video modeling – and found that this was a lot easier to use than the Flip Camera.</li> <li>• Used the iPod Touch more for “on the go” needs – taking video, following a schedule, etc.</li> <li>• Teachers would have preferred to have 2 iPads and 1 iPod Touch rather than the other way around.</li> <li>• The overall message from pilot staff was that the program needed to devote more time and resources to training and support. Otherwise, they felt that they were not going to be able to implement the devices well.</li> <li>• The use of the iPad increased the productivity for job coaches who were using the tool for data collection, access to e-mail and calendars, and to work on reports, etc. while visiting job sites.</li> <li>• Staff found the iPad helpful for data collection for students. They noticed that when they asked Teaching Assistants to take data on the iPad (as compared to a pencil and paper data sheet) they were able to get them to record much more data.</li> <li>• Pilot staff who were trying to use the iPad only to support productivity (e-mail, calendar, note-taking, some document creation / modification), did not find it to be beneficial over the use of a laptop.</li> <li>• The tech staff in the district gained a vast amount of experience and knowledge with regard to the management and use of the iTechnology devices. The pilot program allowed them to gain this invaluable information prior to any kind of a large scale roll-out.</li> </ul>

## Summary

Both quantitative and qualitative outcomes were reported for the iTechnology Pilot in the EC/ELS Program that took place in the spring of the 2010-2011 school year. The primary purpose of the pilot was to determine if the use of iPads and iPod Touches in the classroom had a positive impact on student performance. In addition, the pilot program sought to answer questions with regard to (a) infrastructure and device management, (b) curriculum integration, and (c) policy and guidelines for use of the devices.

An analysis of the data found that the iPads and iPod Touches were most likely to be used during Reading, Writing and Math instruction, while working on discrete skill acquisition in a one-to-one instructional environment. The staff was also likely to have students use the devices during their leisure opportunities. The devices were less frequently used to support communication (e.g., choice making, commenting), organization (e.g., following a schedule, using a checklist), social skills (e.g., turn taking, social exchanges), or to expand educational resources / opportunities (e.g., use of multi-media to emphasize concepts and ideas, writing a story).

Data collected on student performance suggest that when iPads and iPod Touches were used to support classroom instruction, students tended to be more independent, on task, accurate, and behaviorally appropriate as compared to when traditional tools were used. Feedback from the staff involved in the pilot project was used to provide answers to the research questions that related to the infrastructure and management of the devices, the integration of the devices into the curriculum, policy that supports the use of the devices, student outcomes, and other areas. Data are currently being collected in order to determine whether the positive effects remain over time.

## Next Steps

Because the outcomes from the spring EC/ELS iTechnology pilot were positive, a second pilot group was added to the first in the fall of the 2011-2012 school year. Several changes were made to the second pilot based on lessons learned from the first.

- 1) The FTE of the tech staff in the EC/ELS program was increased for the 2011-2012 school year in order to support the use of the iPads and iPod Touches in the classrooms.
- 2) An application process was used to determine which staff would be included in the second pilot study.
- 3) The devices were given out with a set of “core” apps pre-loaded on them, depending on the grade level of the classroom.
- 4) Staff who were receiving iPads as part of the second pilot were provided a full day of training when they received their devices, including a complete introduction to the device, information on data collection, and time to explore the apps that were pre-loaded onto their devices. Additional training / app sharing sessions are scheduled throughout the pilot.
- 5) Staff must still complete an app request form for paid apps that they wish to add to their devices, but they will be sent a code to redeem the app directly on the device instead of having to bring it back to the district office for syncing.
- 6) Staff members were provided with a Google form version of the data sheet so that they could collect outcome data directly on an iPad or iPod Touch.

The desired outcomes from the second pilot include:

- continued data collection with the hopes of increasing data representation from the high school and transition levels;
- the identification of a core set of standard apps per grade level in order to reduce the time teachers spend searching for appropriate apps;
- continued evaluation and investigation into efficient app and device management;
- expanded use of the iPads and iPod Touches beyond discrete skill instruction and leisure;
- continued evaluation and modification of policy as it relates to the use of the devices in the classroom; and
- determination as to whether the positive impact on student behaviors remains over time.

The second pilot is expected to conclude in the early spring of 2012, and the outcomes will again be evaluated in order to help inform future actions and adoption.

In addition to expanding the use of iPads in the EC/ELS Program, NSSD is expanding the use of iPads across the organization. As a result, all interested programs and services within the organization will have access to one or more iPads before winter 2011. These staff members will also be provided with training opportunities and will be asked to participate in data collection efforts.

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A special thank you needs to be extended to all of the EC/ELS Pilot program participants. Your willingness to take on new challenges, provide feedback and collect data, in addition to your already busy schedules, is greatly appreciated. Your dedication to your students is readily apparent, and it is clear that you will do whatever it takes to help them succeed. It will be interesting to look back at this pilot project ten years from now and reflect on where we were at this point in time. It feels as if we are in the midst of a great change in education and technology, a change that could level the playing field and result in significantly improved outcomes for all students. Only time will tell, but you should feel proud knowing that you helped to pioneer a new frontier in educational technology in order to help your students to achieve their full potential.

## Appendix A: Data Sheet from EC/ELS iTechnology Pilot

# EC/ELS iTechnologies Pilot Program Data Collection Form

Teacher:

Date:

Data

Collector:

Student:

**Directions:** Complete this data collection form whenever using **EITHER** traditional classroom tools to support instruction (e.g., worksheets, laminated visual schedules, calendar, Big Mack, Time Timer, flashcards, desktop computer, etc.) **OR** when using Apps on the iPad / iPod Touch.

During what part of the students' day is this task taking place?

☐  
☐  
☐  
☐

Reading, Writing, Math Instruction  
Life Skills Instruction  
Community  
PE/Music/Art

☐  
☐  
☐  
☐

Lunch  
Rec/Leisure/Social  
Transitioning  
Other:

What is the group size?

☐  
☐  
☐  
☐

Independent Work  
1:1 Instruction  
Small Group (2-5)  
Large Group (5 or more)

☐  
☐

How many students in the activity?

How many adults are supporting the activity?

What is the goal of the task that you are taking data on?

☐

**Discrete Skill Acquisition**  
(e.g., number ID, sight words, colors, time, money ID)

☐

**Communication**  
(e.g., choice making, commenting, requesting, social exchanges).

☐

**Social / Behavior**  
(e.g., turn taking, social exchanges, social skills, friendship)

☐

**Expanding Educational Resources / Opportunities**  
(e.g., use of multi-media to emphasize concepts and ideas, use of web-based resources to present information in an alternate format, researching information)

☐

**Leisure**  
(e.g., reading a book, watching a video, listening to music)

☐

**Organization**  
(following a schedule, using a checklist, time management, reinforcement schedules)

☐

**Vocational**  
(following a work sequence, video modeling, other activities related to work)

Which tools are you using to support the task? (either Traditional **OR** iTech not both)

☐

Traditional Tool(s):

Please list:

☐

iPad / iPod Touch

Which app?

Please rate the students' performance on the task.

	1	2	3	4	5	N/A
<b>Independence</b>	Independent 0-20% of task. Required full support and full prompting from adult.	Independent 20-40% of task	independent 40-60% of task	independent 60-80% of task	Independent 80-100% of task. Required little to no prompting/ support	
<b>Motivation / Time on Task</b>	On task 0-20% of the activity. Student was not interested or involved.	On-task 20-40% of task	On-task 40-60% of task	On-Task 60-80% of task	On-task 80-100% of task. Student was fully engaged and interested.	
<b>Accuracy</b>	Student was 0-20% accurate in demonstrating the task.	20-40% accurate	40-60% accurate	60-80% accurate	Student was 80-100% accurate with demonstrating the task.	
<b>Behavior</b>	Student engaged in appropriate behavior 0-20% of the time.	20-40% appropriate behavior	40-60% appropriate behavior	60-80% appropriate behavior	Student engaged in appropriate behavior for 80-100% of the time.	

Comments: